

## EAST Search History

| Ref # | Hits | Search Query   | DBs                       | Default Operator | Plurals | Time Stamp          |
|-------|------|--|---------------------------|------------------|---------|---------------------|
| L1    | 90   | 429//321   | US-PGPUB;<br>USPAT; USOCR | OR               | OFF     | 2008/05/09<br>16:25 |
| L2    | 3    | 1 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR               | OFF     | 2008/05/09<br>16:25 |
| L3    | 265  | 429//322   | US-PGPUB;<br>USPAT; USOCR | OR               | OFF     | 2008/05/09<br>16:29 |
| L4    | 4    | 3 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR               | OFF     | 2008/05/09<br>16:29 |
| L5    | 100  | 429//323   | US-PGPUB;<br>USPAT; USOCR | OR               | OFF     | 2008/05/09<br>16:30 |

|     |      |  |                           |    |     |                     |
|-----|------|--|---------------------------|----|-----|---------------------|
| L6  | 2    | 5 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfе polyvinylidene pvdf fep polyacrilic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:30 |
| L7  | 1803 | 429//231.95  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:30 |
| L8  | 2    | 6 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfе polyvinylidene pvdf fep polyacrilic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:30 |
| L9  | 35   | ((inoue same kaoru) (kato same kiyomi) (suzuki same kohei) (ikuta same shigeo) (fukumoto same yusuke) (hayashi same tetsuya)). in. and lithium and electrode and porosity and separator and insulat \$4  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:32 |
| L10 | 35   | ((inoue same kaoru) (kato same kiyomi) (suzuki same kohei) (ikuta same shigeo) (fukumoto same yusuke) (hayashi same tetsuya)). in. and lithium and electrode\$2 and porosity and separator and insulat \$4   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:32 |

|     |     |   |                           |    |     |                     |
|-----|-----|---|---------------------------|----|-----|---------------------|
| L11 | 12  | ((lithium near3 (battery batteries cell\$2)) and (film layer) and electrode and ((insulat\$3 passivat\$3) near5 (film\$2 layer\$3)) and (porous pore\$2 porosit\$3) and bind\$4 and separator\$2).clm.  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:37 |
| L12 | 1   | 10/562438   | US-PGPUB                  | OR | OFF | 2008/05/09<br>16:52 |
| L13 | 371 | 429//246  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:53 |
| L14 | 15  | 13 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:54 |
| L15 | 324 | 429//251  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:55 |
| L16 | 9   | 15 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2008/05/09<br>16:55 |
| S1  | 1   | 10/562438   | US-PGPUB                  | OR | OFF | 2007/12/07<br>12:37 |
| S2  | 1   | S1 and apparent   | US-PGPUB                  | OR | OFF | 2006/10/18<br>11:43 |
| S3  | 0   | hei.in. and (lithium same battery)  | US-PGPUB                  | OR | OFF | 2006/10/18<br>11:43 |

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|-----|-----|--|---------------------------|----|-----|---------------------|
| S4  | 0   | hei.in. and (lithium same battery)   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:43 |
| S5  | 0   | (hei).in. and (lithium same battery)   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:44 |
| S6  | 0   | (hei).in. and (lithium same battery)   | JPO                       | OR | OFF | 2006/10/18<br>11:44 |
| S7  | 0   | (hei).in. and battery  | JPO                       | OR | OFF | 2006/10/18<br>11:44 |
| S8  | 14  | (hei).in. and battery  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:47 |
| S9  | 77  | 429//321   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:59 |
| S10 | 63  | S9 and lithium and (film layer)  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:48 |
| S11 | 32  | S9 and lithium and (film layer) and electrode and binder\$2  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:48 |
| S12 | 8   | S9 and lithium and (film layer) and electrode and binder\$2 and porosity and size\$2 and particle \$2  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:50 |
| S13 | 5   | S9 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator \$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>11:59 |
| S14 | 204 | 429//322   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:04 |
| S15 | 6   | S14 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator\$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:04 |

|     |       |   |                           |    |     |                     |
|-----|-------|---|---------------------------|----|-----|---------------------|
| S16 | 88    | 429//323  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/19<br>12:32 |
| S17 | 3     | S16 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator\$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania)                                    | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:05 |
| S18 | 1436  | 429//231.95   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:05 |
| S19 | 161   | S18 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator\$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania)                                    | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:06 |
| S20 | 38    | S18 and lithium and (film layer) and electrode and binder\$2 and (porosity porous pores) and particle\$2 and separator\$2 and (styrene polyethylene ptfe polyvinylidene pvdf fep polyacrylic polyacrylonitrile) and ((inorganic near oxide \$2) alumina silica zirconia titania) and (insulat\$3 adj3 (film layer)) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/18<br>12:06 |
| S21 | 14966 | inoue.in.   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/19<br>12:32 |
| S22 | 127   | inoue.in. and electrode and (inorganic oxide filler) and film and (pores porous porosity) and (binder\$2 adhesive \$2)  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/19<br>12:33 |

|     |    |   |                        |    |     |                  |
|-----|----|---|------------------------|----|-----|------------------|
| S23 | 48 | inoue.in. and electrode and (inorganic oxide filler) and film and (pores porous porosity) and (binder\$2 adhesive \$2) and (insulat\$4 near5 film\$2)                             | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/19 12:35 |
| S24 | 9  | inoue.in. and electrode and (inorganic oxide filler) and film and (pores porous porosity) and (binder\$2 adhesive \$2) and (insulat\$4 near5 film\$2) and (lithium near5 battery) | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/19 12:35 |
| S25 | 1  | "6395423".pn.   | USPAT                  | OR | OFF | 2006/10/19 13:04 |
| S26 | 0  | S25 and (aqueous same electrolyte same battery) and (positive same negative same electrode\$2 same separator\$2)  | USPAT                  | OR | OFF | 2006/10/19 13:05 |
| S27 | 0  | S25 and (aqueous same electrolyte same battery) and (electrode \$2 same separator\$2)   | USPAT                  | OR | OFF | 2006/10/19 13:05 |
| S28 | 0  | S25 and aqueous   | USPAT                  | OR | OFF | 2006/10/19 13:05 |
| S29 | 1  | S25 and electrolyte and separator and electrode \$2   | USPAT                  | OR | OFF | 2006/10/19 13:06 |
| S30 | 1  | S25 and electrolyte and separator and electrode \$2 and battery   | USPAT                  | OR | OFF | 2006/10/19 13:13 |
| S31 | 1  | S25 and (organic near5 electrolyte)   | USPAT                  | OR | OFF | 2006/10/19 13:14 |
| S32 | 1  | S25 and electrolyte   | USPAT                  | OR | OFF | 2006/10/19 13:31 |
| S33 | 1  | S25 and (insulat\$4 near5 film)   | USPAT                  | OR | OFF | 2006/10/19 13:38 |
| S34 | 0  | S25 and (insulat\$4 near5 film) and film\$2 and (oxide same filler same binder)   | USPAT                  | OR | OFF | 2006/10/19 13:39 |
| S35 | 0  | S25 and (insulat\$4 near5 film) and film\$2 and oxide and filler and binder   | USPAT                  | OR | OFF | 2006/10/19 13:39 |

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|-----|----|--|-----------------|----|-----|------------------|
| S36 | 0  | S25 and (insulat\$4 near5 film) and film\$2 and oxide and filler and adhesiv\$4                          | USPAT           | OR | OFF | 2006/10/19 13:39 |
| S37 | 0  | S25 and (insulat\$4 near5 film) and film\$2 and filler and adhesiv\$4                                    | USPAT           | OR | OFF | 2006/10/19 13:39 |
| S38 | 1  | S25 and (insulat\$4 near5 film) and film\$2 and oxide and (adhesiv \$4 binder)                           | USPAT           | OR | OFF | 2006/10/19 13:40 |
| S39 | 1  | S25 and (insulat\$4 near5 film) and film\$2 and oxide and (adhesiv \$4 binder) and (cover\$3 near5 film) | USPAT           | OR | OFF | 2006/10/19 14:19 |
| S40 | 1  | S25 and thickness and porosity   | USPAT           | OR | OFF | 2006/10/19 14:22 |
| S41 | 1  | S25 and thickness and porosity and size\$2   | USPAT           | OR | OFF | 2006/10/19 14:37 |
| S42 | 0  | S25 and thickness and porosity and size\$2 and thick   | USPAT           | OR | OFF | 2006/10/19 14:24 |
| S43 | 1  | S25 and (pore same size \$2)   | USPAT           | OR | OFF | 2006/10/19 14:38 |
| S44 | 1  | S25 and pore\$2  | USPAT           | OR | OFF | 2006/10/19 14:41 |
| S45 | 0  | S25 and polycrystal\$6   | USPAT           | OR | OFF | 2006/10/19 14:41 |
| S46 | 1  | S25 and crystal\$5   | USPAT           | OR | OFF | 2006/10/19 15:26 |
| S47 | 1  | S25 and particle\$3  | USPAT           | OR | OFF | 2006/10/19 17:59 |
| S48 | 1  | S25 and particle\$3 and \$5crystal\$5  | USPAT           | OR | OFF | 2006/10/19 15:29 |
| S49 | 1  | 10/562438  | US-PGPUB        | OR | OFF | 2006/10/19 15:34 |
| S50 | 1  | S49 and polycrystal\$6   | US-PGPUB        | OR | OFF | 2006/10/19 15:40 |
| S51 | 0  | kawakimi.in. and (inorganic near5 oxide)   | US-PGPUB        | OR | OFF | 2006/10/19 15:40 |
| S52 | 0  | kawakimi.in. and (inorganic near5 oxide)   | US-PGPUB; USPAT | OR | OFF | 2006/10/19 15:40 |
| S53 | 70 | kawakami.in. and (inorganic near5 oxide)   | US-PGPUB; USPAT | OR | OFF | 2006/10/19 15:40 |
| S54 | 2  | kawakami.in. and (inorganic near5 oxide) same \$5crystal\$5  | US-PGPUB; USPAT | OR | OFF | 2006/10/19 15:41 |

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|-----|------|---|------------------------|----|-----|------------------|
| S55 | 48   | kawakami.in. and (inorganic near5 oxide) and \$5crystal\$5  | US-PGPUB; USPAT        | OR | OFF | 2006/10/19 15:41 |
| S56 | 9    | kawakami.in. and (inorganic near5 oxide) and \$5crystal\$5 and battery and lithium  | US-PGPUB; USPAT        | OR | OFF | 2006/10/19 15:41 |
| S57 | 1    | "6811982".pn.   | USPAT                  | OR | OFF | 2006/10/21 12:27 |
| S58 | 0    | S57 and \$5crystal\$5   | USPAT                  | OR | OFF | 2006/10/19 18:11 |
| S59 | 1    | S25 and size and separator  | USPAT                  | OR | OFF | 2006/10/19 17:59 |
| S60 | 1    | S25 and size\$2 and separator   | USPAT                  | OR | OFF | 2006/10/19 17:59 |
| S61 | 1    | S25 and size\$2 and separator and porosity and porous   | USPAT                  | OR | OFF | 2006/10/19 18:00 |
| S62 | 1    | S25 and size\$2 and separator and porosity and porous and pore  | USPAT                  | OR | OFF | 2006/10/19 18:00 |
| S63 | 0    | S57 and separator and por\$6  | USPAT                  | OR | OFF | 2006/10/19 18:10 |
| S64 | 0    | S57 and separator   | USPAT                  | OR | OFF | 2006/10/19 18:10 |
| S65 | 1    | "6811928".pn.   | USPAT                  | OR | OFF | 2006/10/19 18:11 |
| S66 | 0    | S65 and \$5crystal\$5   | USPAT                  | OR | OFF | 2006/10/21 12:24 |
| S67 | 1    | S65 and separator and por\$6  | USPAT                  | OR | OFF | 2006/10/22 17:07 |
| S68 | 357  | ((lithium same battery) and ((insulat\$4 near5 (film layer)) and porosity   | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/22 12:46 |
| S69 | 17   | ((lithium same battery) and ((insulat\$4 near5 (film layer)) and (separator near5 porosity) and ((insulat\$4 near5 (film layer)) same porosity) | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/22 13:30 |
| S70 | 1    | 10/562438   | US-PGPUB               | OR | OFF | 2006/10/22 12:59 |
| S71 | 3843 | S70 separator and actual and ratio  | US-PGPUB               | OR | OFF | 2006/10/22 12:59 |
| S72 | 1    | S70 and separator and actual and ratio  | US-PGPUB               | OR | OFF | 2006/10/22 13:09 |



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|-----|-----|--|---------------------------|----|-----|---------------------|
| S73 | 0   | (zhang same zhangming).in.   | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:12 |
| S74 | 0   | celgard.as.  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:11 |
| S75 | 55  | celgard.as.  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:11 |
| S76 | 23  | celgard.as. and separator and lithium and battery  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:11 |
| S77 | 12  | (zhang same zhengming).in.   | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:26 |
| S78 | 1   | "6432586".pn.  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:13 |
| S79 | 1   | S78 and separator and film and porosity  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:13 |
| S80 | 1   | S78 and separator and film and porosity and size \$2 and pore  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:20 |
| S81 | 3   | S77 and separator and film and porosity and size \$2 and pore  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:20 |
| S82 | 67  | (ito same masanori).in.  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:26 |
| S83 | 0   | (ito same masanori).in. and separator and lithium and battery and insulat\$6 and film                            | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:27 |
| S84 | 0   | (ito same masanori).in. and separator and lithium and battery and film   | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:27 |
| S85 | 0   | (ito same masanori).in. and separator and lithium and battery  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:27 |
| S86 | 0   | S82 and separator and lithium and battery  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:28 |
| S87 | 3   | S82 and battery  | US-PGPUB;<br>USPAT        | OR | OFF | 2006/10/22<br>13:28 |
| S88 | 372 | (lithium same battery) and (separator near5 porosity)  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>13:48 |
| S89 | 359 | (lithium same battery) and (separator near5 porosity) and (ceramic nea5 (layer film)) and (pore porous porosity) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>13:49 |

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|------|-----|---|---------------------------|----|-----|---------------------|
| S90  | 11  | (lithium same battery) and (separator near5 porosity) and (ceramic near5 (layer film)) and (pore porous porosity)                         | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>14:06 |
| S91  | 0   | (lithium same battery) and (separator near5 porosity) and (ceramic near5 (layer film)) and (pore porous porosity)                         | EPO; JPO;<br>DERWENT      | OR | OFF | 2006/10/22<br>14:06 |
| S92  | 18  | (lithium same battery) and (separator same porosity) and (ceramic near5 (layer film)) and (pore porous porosity)                          | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>14:12 |
| S93  | 733 | (lithium same battery) and separator and ((insulative insulating ceramic) near5 (layer film)) and (pore porous porosity)                  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>14:13 |
| S94  | 96  | (lithium same battery) and (separator near5 porosity) and ((insulative insulating ceramic) near5 (layer film)) and (pore porous porosity) | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>14:34 |
| S95  | 106 | (lithium same battery) and (separator near5 porosity) and ((insulating ceramic inorganic) near5 (layer film)) and (pore porous porosity)  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:14 |
| S96  | 1   | "6395423".pn.   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:14 |
| S97  | 1   | S96 and porosity  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:17 |
| S98  | 1   | "6811928".pn.   | USPAT                     | OR | OFF | 2006/10/22<br>15:17 |
| S99  | 1   | S98 and porosity  | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>16:16 |
| S100 | 1   | "6287720".pn.   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:22 |
| S101 | 1   | S100 and porosity   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:25 |
| S102 | 96  | (lithium near battery) and (separator same (polypropylene PPE) same porosity)   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:37 |

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|------|-------|---|---------------------------|----|-----|---------------------|
| S103 | 30    | (lithium near battery) and ((inorganic ceramic) same (film separator) same porosity)                            | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:43 |
| S104 | 30    | (lithium near battery) and ((inorganic ceramic) same (film separator) same porosity) and porosity               | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:43 |
| S105 | 41    | (lithium near battery) and ((inorganic ceramic) same (layer film separator coat\$3) same porosity) and porosity | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:51 |
| S106 | 1     | "4791144".pn.   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:51 |
| S107 | 1     | S106 and filler\$2 and porosity   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>15:51 |
| S108 | 1     | "6881515".pn.   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>16:16 |
| S109 | 1     | S108 and polypropylene and separator and porosity   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>16:18 |
| S110 | 71    | (lithium same battery) and (((polypropylene PPE) near5 separator) same porosity) and porosity                   | US-PGPUB;<br>USPAT; USOCR | OR | OFF | 2006/10/22<br>16:19 |
| S111 | 1     | "6395423".pn.   | USPAT                     | OR | OFF | 2006/10/22<br>17:07 |
| S112 | 0     | S111 and (porosity pore size\$2 porous) and separator and filler  | USPAT                     | OR | OFF | 2006/10/22<br>17:08 |
| S113 | 1     | S111 and (porosity pore size\$2 porous) and separator and inorganic   | USPAT                     | OR | OFF | 2006/10/22<br>17:08 |
| S114 | 4301  | H01M006/18  | EPO; JPO;<br>DERWENT      | OR | OFF | 2006/10/29<br>13:52 |
| S115 | 9     | S114 and lithium and battery and film and porosity  | EPO; JPO;<br>DERWENT      | OR | OFF | 2006/10/29<br>13:52 |
| S116 | 17647 | H01M004/58  | EPO; JPO;<br>DERWENT      | OR | OFF | 2006/10/29<br>13:52 |
| S117 | 7     | S116 and lithium and battery and film and porosity  | EPO; JPO;<br>DERWENT      | OR | OFF | 2006/10/29<br>13:53 |
| S118 | 1     | "6395423".pn.   | USPAT                     | OR | OFF | 2006/10/29<br>13:56 |

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|------|-----|--|-----------------|----|-----|------------------|
| S119 | 0   | S114 and separator and porosity  | USPAT           | OR | OFF | 2006/10/29 17:13 |
| S120 | 1   | S118 and separator and porosity  | USPAT           | OR | OFF | 2006/10/29 13:56 |
| S121 | 1   | S118 and separator\$2 and porosit\$4   | USPAT           | OR | OFF | 2006/10/29 15:40 |
| S122 | 276 | (lithium near\$5 battery) and (separator\$4 near\$5 porosity)                                      | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:07 |
| S123 | 276 | (lithium near\$5 battery) and (separator\$4 near\$5 porosity) and porosity                         | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:09 |
| S124 | 276 | (lithium near\$5 battery) and (separator\$4 near\$5 porosity) and porosity and separator           | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:13 |
| S125 | 707 | nagayama.in.   | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:13 |
| S126 | 3   | S125 and (lithium near\$5 battery) and (separator \$4 near\$5 porosity) and porosity and separator | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:13 |
| S127 | 0   | sun.in. and (lithium near\$5 battery) and (heat near activatabl)                                   | USPAT           | OR | OFF | 2006/10/29 14:27 |
| S128 | 0   | sun.in. and (lithium near\$5 battery) and (heat near activatabl)                                   | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:27 |
| S129 | 7   | sun.in. and (lithium near\$5 battery) and (heat near activatable)                                  | US-PGPUB; USPAT | OR | OFF | 2006/10/29 14:30 |
| S130 | 1   | "20030152828"  | US-PGPUB        | OR | OFF | 2006/10/29 14:31 |
| S131 | 1   | S130 and porosity  | US-PGPUB        | OR | OFF | 2006/10/29 19:06 |
| S132 | 1   | S118 and pore and size \$3   | USPAT           | OR | OFF | 2006/10/29 17:08 |
| S133 | 1   | S130 and pore and size \$2   | US-PGPUB        | OR | OFF | 2006/10/29 16:01 |
| S134 | 1   | 10/562438  | US-PGPUB        | OR | OFF | 2006/10/29 16:01 |
| S135 | 1   | S134 and electrode\$2 and rough\$4   | US-PGPUB        | OR | OFF | 2006/10/29 16:33 |
| S136 | 170 | (lithium same battery) and (electrode same roughness)  | US-PGPUB; USPAT | OR | OFF | 2006/10/29 16:11 |

|      |     |  |                 |    |     |                  |
|------|-----|--|-----------------|----|-----|------------------|
| S137 | 29  | (lithium same battery) and (electrode same roughness) and (dry\$3 same (speed rate))         | US-PGPUB; USPAT | OR | OFF | 2006/10/29 16:11 |
| S138 | 1   | S118 and crystal\$5 and size\$2  | USPAT           | OR | OFF | 2006/10/29 16:26 |
| S139 | 0   | S130 and crystal\$5  | US-PGPUB        | OR | OFF | 2006/10/29 16:32 |
| S140 | 0   | S134 and polycrystal\$^  | US-PGPUB        | OR | OFF | 2006/10/29 16:33 |
| S141 | 1   | S134 and polycrystal\$   | US-PGPUB        | OR | OFF | 2006/10/29 16:37 |
| S142 | 17  | (lithium same battery) and (filler\$2 same (crystalline polycrystal\$5 crystal\$) same film) | US-PGPUB        | OR | OFF | 2006/10/29 16:38 |
| S143 | 25  | (lithium same battery) and (filler\$2 same (crystalline polycrystal\$5 crystal\$) same film) | US-PGPUB; USPAT | OR | OFF | 2006/10/29 16:42 |
| S144 | 125 | (lithium same battery) and (filler\$2 same (crystalline polycrystal\$5 crystal\$))           | US-PGPUB; USPAT | OR | OFF | 2006/10/29 16:42 |
| S145 | 0   | S118 and filler\$2   | USPAT           | OR | OFF | 2006/10/29 16:47 |
| S146 | 1   | S118 and inorganic   | USPAT           | OR | OFF | 2006/10/29 17:00 |
| S147 | 29  | (sol near\$5 polycrystalline) and particles  | USPAT           | OR | OFF | 2006/10/29 17:01 |
| S148 | 0   | (sol near\$5 polycrystalline) and particles and colloid                                      | USPAT           | OR | OFF | 2006/10/29 17:01 |
| S149 | 0   | (sol near\$5 polycrystalline) and particles and colloid                                      | USPAT           | OR | OFF | 2006/10/29 17:01 |
| S150 | 2   | (sol near\$5 polycrystalline) and particles and colloid\$3                                   | USPAT           | OR | OFF | 2006/10/29 17:01 |
| S151 | 0   | S130 and size\$2   | USPAT           | OR | OFF | 2006/10/29 17:08 |
| S152 | 1   | S130 and size\$2   | US-PGPUB        | OR | OFF | 2006/10/29 17:25 |
| S153 | 0   | S114 and binder  | USPAT           | OR | OFF | 2006/10/29 17:13 |
| S154 | 0   | S114 and cross\$7  | USPAT           | OR | OFF | 2006/10/29 17:14 |

|      |    |   |                    |    |     |                     |
|------|----|---|--------------------|----|-----|---------------------|
| S155 | 1  | S118 and cross\$7   | USPAT              | OR | OFF | 2006/10/29<br>17:14 |
| S156 | 1  | S118 and cross\$7 and binder  | USPAT              | OR | OFF | 2006/10/29<br>17:22 |
| S157 | 0  | S118 and cross\$7 and binder and weight   | USPAT              | OR | OFF | 2006/10/29<br>17:16 |
| S158 | 1  | S118 and part\$2  | USPAT              | OR | OFF | 2006/10/29<br>17:23 |
| S159 | 0  | S130 and binder\$2 and part\$2  | US-PGPUB           | OR | OFF | 2006/10/29<br>17:25 |
| S160 | 0  | S130 and binder\$2  | US-PGPUB           | OR | OFF | 2006/10/29<br>17:25 |
| S161 | 1  | S130 and part\$2  | US-PGPUB           | OR | OFF | 2006/10/29<br>17:29 |
| S162 | 0  | S118 and colloid\$3   | US-PGPUB           | OR | OFF | 2006/10/29<br>17:29 |
| S163 | 1  | S118 and colloid\$3   | USPAT              | OR | OFF | 2006/10/29<br>17:29 |
| S164 | 1  | "6811928".pn.   | USPAT              | OR | OFF | 2006/10/29<br>17:42 |
| S165 | 1  | S164 and filler   | USPAT              | OR | OFF | 2006/10/29<br>17:42 |
| S166 | 65 | (lithium same battery) and (surface same roughness same adhesion)                                 | US-PGPUB;<br>USPAT | OR | OFF | 2006/10/29<br>18:14 |
| S167 | 65 | (lithium same battery) and (surface same roughness same adhesion) and roughness                   | US-PGPUB;<br>USPAT | OR | OFF | 2006/10/29<br>18:15 |
| S168 | 5  | (lithium same battery) and (surface same roughness same adhesion same separator) and roughness    | US-PGPUB;<br>USPAT | OR | OFF | 2006/10/29<br>18:18 |
| S169 | 34 | (lithium same battery) and (roughness same adhesion same electrode) and roughness                 | US-PGPUB;<br>USPAT | OR | OFF | 2006/10/29<br>18:18 |
| S170 | 35 | (lithium same battery) and (roughness same adhesion same (anode cathode electrode)) and roughness | US-PGPUB;<br>USPAT | OR | OFF | 2006/10/29<br>18:25 |

|      |     |   |                        |    |     |                  |
|------|-----|---|------------------------|----|-----|------------------|
| S171 | 203 | (lithium same battery) and (roughness same (anode cathode electrode)) and roughness   | US-PGPUB; USPAT        | OR | OFF | 2006/10/29 18:42 |
| S172 | 63  | (lithium same battery) and (roughness near3 (anode cathode electrode)) and roughness  | US-PGPUB; USPAT        | OR | OFF | 2006/10/29 18:42 |
| S173 | 63  | (lithium same battery) and (roughness near3 (anode cathode electrode)) and roughness  | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/29 18:42 |
| S174 | 0   | S130 and void\$2  | US-PGPUB               | OR | OFF | 2006/10/29 19:06 |
| S175 | 0   | S130 and void\$2  | USPAT                  | OR | OFF | 2006/10/29 19:06 |
| S176 | 1   | S118 and void\$2  | USPAT                  | OR | OFF | 2006/10/29 19:06 |
| S177 | 255 | ((inoue same kaoru) (kato same kiyomi) (suzuki same kohei) (ikuta same shigeo) (fukumoto same yusuke) (hayashi same tetsuya)). in.  | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/29 19:25 |
| S178 | 29  | ((inoue same kaoru) (kato same kiyomi) (suzuki same kohei) (ikuta same shigeo) (fukumoto same yusuke) (hayashi same tetsuya)). in. and lithium and electrode and porosity and separator                 | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/29 19:27 |
| S179 | 25  | ((inoue same kaoru) (kato same kiyomi) (suzuki same kohei) (ikuta same shigeo) (fukumoto same yusuke) (hayashi same tetsuya)). in. and lithium and electrode and porosity and separator and insulat \$4 | US-PGPUB; USPAT; USOCR | OR | OFF | 2006/10/29 19:27 |
| S180 | 1   | 10/562438   | US-PGPUB               | OR | OFF | 2007/04/17 12:18 |
| S181 | 1   | S180 and adher\$4 and interface and void  | US-PGPUB               | OR | OFF | 2007/04/17 12:19 |

|      |   |  |          |    |     |                     |
|------|---|--|----------|----|-----|---------------------|
| S182 | 1 | 10/562438  | US-PGPUB | OR | OFF | 2007/04/18<br>12:14 |
| S183 | 1 | S182 and roughness   | US-PGPUB | OR | OFF | 2007/04/18<br>12:37 |
| S184 | 1 | S182 and separator\$2  | US-PGPUB | OR | OFF | 2007/04/18<br>14:09 |
| S185 | 1 | S182 and separator\$2<br>and film  | US-PGPUB | OR | OFF | 2007/04/18<br>13:20 |
| S186 | 2 | ("6053953"   "6287720").<br>PN.  | USPAT    | OR | OFF | 2007/04/18<br>13:20 |
| S187 | 1 | S182 and oxide\$2 and<br>polycrystal\$5  | US-PGPUB | OR | OFF | 2007/04/18<br>14:17 |
| S188 | 1 | S182 and oxide\$2 and<br>polycrystal\$5 and glass<br>\$3   | US-PGPUB | OR | OFF | 2007/04/18<br>14:17 |
| S189 | 1 | S182 and polycrystal\$5<br>and glass\$3  | US-PGPUB | OR | OFF | 2007/04/18<br>14:17 |
| S190 | 1 | "20030152828"  | US-PGPUB | OR | OFF | 2007/04/23<br>18:11 |
| S191 | 1 | "20020055036"  | US-PGPUB | OR | OFF | 2007/05/17<br>10:15 |
| S192 | 1 | S191 and separator\$2<br>and (microporous near<br>layer\$2)  | US-PGPUB | OR | OFF | 2007/05/17<br>10:28 |
| S193 | 1 | S191 and particle\$2   | US-PGPUB | OR | OFF | 2007/05/17<br>10:28 |
| S194 | 1 | S191 and inorganic   | US-PGPUB | OR | OFF | 2007/05/17<br>10:31 |
| S195 | 0 | S191 and inorganic and<br>binder\$2  | US-PGPUB | OR | OFF | 2007/05/17<br>10:31 |
| S196 | 0 | S191 and inorganic and<br>adhesive\$2  | US-PGPUB | OR | OFF | 2007/05/17<br>10:32 |
| S197 | 0 | S191 and inorganic and<br>binder\$2  | US-PGPUB | OR | OFF | 2007/05/17<br>10:32 |
| S198 | 1 | S191 and inorganic and<br>binder\$2  | US-PGPUB | OR | OFF | 2007/05/17<br>10:38 |
| S200 | 0 | S191 and inorganic and<br>binder\$2 and<br>(thermoplastic same<br>resin same (heat near<br>resistant)) | US-PGPUB | OR | OFF | 2007/05/17<br>10:39 |
| S201 | 1 | S191 and inorganic and<br>binder\$2 and<br>(thermoplastic same<br>resin) and (heat near<br>resistant)  | US-PGPUB | OR | OFF | 2007/05/17<br>10:47 |



|      |   |   |          |    |     |                  |
|------|---|---|----------|----|-----|------------------|
| S202 | 1 | S191 and inorganic and binder\$2 and (thermoplastic same resin) and (heat near resistant) and spacer and shut                   | US-PGPUB | OR | OFF | 2007/05/17 10:50 |
| S203 | 1 | S191 and inorganic and binder\$2 and (thermoplastic same resin) and (heat near resistant) and spacer and shut and electrode \$2 | US-PGPUB | OR | OFF | 2007/05/17 10:53 |
| S204 | 1 | 10/562438   | US-PGPUB | OR | OFF | 2007/05/17 10:53 |
| S205 | 1 | S191 and separator  | US-PGPUB | OR | OFF | 2007/05/17 11:52 |
| S206 | 1 | S204 and separator  | US-PGPUB | OR | OFF | 2007/05/17 10:54 |
| S207 | 0 | S191 and (resin\$2 same "5a")   | US-PGPUB | OR | OFF | 2007/05/17 11:27 |
| S208 | 1 | S191 and (resin\$2 abd "5a")  | US-PGPUB | OR | OFF | 2007/05/17 11:27 |
| S209 | 0 | S191 and (resin\$2 and "5a")  | US-PGPUB | OR | OFF | 2007/05/17 11:27 |
| S210 | 0 | S191 and resin\$2 and "5a"  | US-PGPUB | OR | OFF | 2007/05/17 11:27 |
| S211 | 1 | S204 and resin\$2 and "5a"  | US-PGPUB | OR | OFF | 2007/05/17 11:36 |
| S212 | 1 | S204 and filler and binder  | US-PGPUB | OR | OFF | 2007/05/17 11:44 |
| S213 | 1 | S204 and (film near binder)   | US-PGPUB | OR | OFF | 2007/05/17 12:20 |
| S214 | 1 | S204 and (film near binder) and "5a" and resin  | US-PGPUB | OR | OFF | 2007/05/17 11:44 |
| S215 | 1 | S191 and spacer   | US-PGPUB | OR | OFF | 2007/05/17 11:58 |
| S216 | 0 | S191 and spacer and porosity and pore   | US-PGPUB | OR | OFF | 2007/05/17 11:58 |
| S217 | 1 | S191 and spacer and percentage and pore   | US-PGPUB | OR | OFF | 2007/05/17 11:58 |
| S218 | 1 | S204 and porosity and (insulating near film)  | US-PGPUB | OR | OFF | 2007/05/17 12:26 |
| S219 | 1 | S204 and porosity and (insulating near film) and binder\$2 and resin \$2  | US-PGPUB | OR | OFF | 2007/05/17 12:33 |

|      |   |  |          |    |     |                     |
|------|---|--|----------|----|-----|---------------------|
| S220 | 0 | "4650730".pn.  | US-PGPUB | OR | OFF | 2007/05/17<br>12:33 |
| S221 | 1 | "4650730".pn.  | USPAT    | OR | OFF | 2007/05/17<br>12:33 |
| S222 | 1 | S221 and inorganic                                       | USPAT    | OR | OFF | 2007/05/17<br>12:34 |
| S223 | 1 | S221 and filler\$2 and ply                               | USPAT    | OR | OFF | 2007/05/17<br>12:39 |
| S224 | 1 | S221 and porosity  | USPAT    | OR | OFF | 2007/05/17<br>12:41 |
| S225 | 1 | S221 and pore and<br>volume                              | USPAT    | OR | OFF | 2007/05/17<br>12:41 |
| S226 | 1 | "20040161598"  | US-PGPUB | OR | OFF | 2007/05/18<br>10:17 |
| S227 | 1 | S226 and inorganic                                       | US-PGPUB | OR | OFF | 2007/05/18<br>10:17 |
| S228 | 1 | "5705292".pn.  | USPAT    | OR | OFF | 2007/05/22<br>20:47 |
| S229 | 1 | S228 and porosity  | USPAT    | OR | OFF | 2007/05/22<br>20:07 |
| S230 | 0 | S228 and porosity and<br>heat and film and<br>inorganic  | USPAT    | OR | OFF | 2007/05/22<br>20:08 |
| S231 | 0 | S228 and porosity and<br>heat and film and silicon       | USPAT    | OR | OFF | 2007/05/22<br>20:08 |
| S232 | 1 | S228 and porosity and<br>heat and film and alumin<br>\$3 | USPAT    | OR | OFF | 2007/05/22<br>20:39 |
| S233 | 1 | S228 and pore\$2   | USPAT    | OR | OFF | 2007/05/22<br>20:39 |
| S234 | 1 | S228 and size\$2   | USPAT    | OR | OFF | 2007/05/22<br>20:40 |
| S235 | 1 | "20020055036"  | US-PGPUB | OR | OFF | 2007/05/23<br>18:22 |
| S236 | 1 | S235 and pore\$2 and<br>(size\$2 diamet\$3)              | US-PGPUB | OR | OFF | 2007/05/22<br>21:42 |
| S237 | 0 | S228 and pore\$2 and<br>(size\$2 diamet\$3)              | US-PGPUB | OR | OFF | 2007/05/22<br>20:44 |
| S238 | 1 | "20040161598"  | US-PGPUB | OR | OFF | 2007/05/22<br>20:44 |
| S239 | 1 | S238 and pore\$2 and<br>(size\$2 diamet\$3)              | US-PGPUB | OR | OFF | 2007/05/22<br>20:46 |
| S240 | 1 | S228 and pore\$2 and<br>(size\$2 diamet\$3)              | USPAT    | OR | OFF | 2007/05/22<br>20:47 |
| S241 | 1 | "4650730".pn.  | USPAT    | OR | OFF | 2007/05/22<br>20:47 |

|      |   |   |          |    |     |                  |
|------|---|---|----------|----|-----|------------------|
| S242 | 1 | S241 and pore\$2 and (size\$2 diamet\$3)                                      | USPAT    | OR | OFF | 2007/05/22 20:47 |
| S243 | 1 | S235 and pore\$2 and (size\$2 diamet\$3) and alumina                          | US-PGPUB | OR | OFF | 2007/05/22 21:00 |
| S244 | 1 | S235 and pore\$2 and (size\$2 diamet\$3) and alumina and inorganic            | US-PGPUB | OR | OFF | 2007/05/22 21:05 |
| S245 | 1 | S241 and pore\$2 and (size\$2 diamet\$3) and alumina and inorganic            | USPAT    | OR | OFF | 2007/05/22 21:07 |
| S246 | 1 | S241 and pore\$2 and (size\$2 diamet\$3) and alumina and inorganic and second | USPAT    | OR | OFF | 2007/05/22 21:07 |
| S247 | 1 | 10/562438   | US-PGPUB | OR | OFF | 2007/05/22 21:43 |
| S248 | 0 | S247 and bet  | US-PGPUB | OR | OFF | 2007/05/22 21:43 |
| S249 | 0 | S247 and BET  | US-PGPUB | OR | OFF | 2007/05/22 21:43 |
| S250 | 1 | S247 and mercury  | US-PGPUB | OR | OFF | 2007/05/22 21:44 |
| S251 | 1 | S247 and mercury and interface  | US-PGPUB | OR | OFF | 2007/05/22 21:44 |
| S252 | 1 | "20020055036"   | US-PGPUB | OR | OFF | 2007/05/23 18:22 |
| S253 | 1 | S252 and (heat near resistant) and inorganic                                  | US-PGPUB | OR | OFF | 2007/05/23 18:23 |
| S254 | 1 | 10/562438   | US-PGPUB | OR | OFF | 2007/11/16 11:55 |
| S255 | 1 | S254 and less   | US-PGPUB | OR | OFF | 2007/11/16 11:56 |
| S256 | 1 | S254 and (porosity same insulating same film same (less\$3 smal\$4))          | US-PGPUB | OR | OFF | 2007/11/16 12:02 |
| S257 | 1 | S254 and (dendrit\$4 grape polycrystallin\$4)                                 | US-PGPUB | OR | OFF | 2007/11/16 12:03 |
| S258 | 1 | "5705292".pn.   | USPAT    | OR | OFF | 2007/12/07 11:57 |
| S259 | 1 | S258 and spray\$3 and temperature\$2  | USPAT    | OR | OFF | 2007/11/16 12:44 |
| S260 | 1 | 10/562438   | US-PGPUB | OR | OFF | 2007/11/27 14:17 |
| S261 | 1 | S260 and porosity   | US-PGPUB | OR | OFF | 2007/11/27 14:17 |
| S262 | 1 | "20020055036"   | US-PGPUB | OR | OFF | 2007/12/06 17:15 |

|      |      |  |                        |    |     |                  |
|------|------|--|------------------------|----|-----|------------------|
| S263 | 458  | S262 and inorganic and binder\$2 (thermoplastic same resin same (heat near resistant))   | US-PGPUB               | OR | OFF | 2007/12/06 17:20 |
| S264 | 3813 | (lithium near3 battery) and inorganic and binder \$2 (thermoplastic same resin same (heat near resistant))   | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:20 |
| S265 | 1    | (lithium near3 battery) and inorganic and binder \$2 and (thermoplastic same resin same (heat near resistant))                                       | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:20 |
| S266 | 9    | (lithium near2 battery) and (((shutdown shutdown) near separator \$2) same porositi\$3)  | US-PGPUB               | OR | OFF | 2007/12/06 17:23 |
| S267 | 17   | (lithium near2 battery) and (((shutdown shutdown) near separator \$2) same porositi\$3)  | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:27 |
| S268 | 4    | (lithium near2 battery) and ((insulating near film) same porositi\$3)  | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:28 |
| S269 | 4    | (lithium near2 battery) and (((insulating near film) same porositi\$3) and porositi\$4   | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:31 |
| S270 | 7    | (lithium near2 battery) and ((insulating near layer\$2) same porositi\$3) and porositi\$4  | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:36 |
| S271 | 1    | (lithium near2 battery) and ((heat near insulat \$4) same porositi\$3) and porositi\$4 and separator \$2   | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:37 |
| S272 | 18   | (lithium near2 battery) and ((heat near resistant) same porositi\$3) and porositi\$4 and separator\$2  | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:40 |
| S273 | 13   | (lithium near2 battery) and (((thermal heat) near (insulat\$4 resistant) near (film\$3 layer\$3)) same porositi\$3) and porositi\$4 and separator\$2 | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:52 |

|      |    |  |                        |    |     |                  |
|------|----|--|------------------------|----|-----|------------------|
| S274 | 7  | (lithium near2 battery) and (separator same (resin near layer\$2) same porosit\$3) and porosit\$4 and separator \$2        | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:58 |
| S275 | 15 | (lithium near2 battery) and (separator same (resin near (film layer \$2)) same porosit\$3) and porosit\$4 and separator\$2 | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/06 17:59 |
| S276 | 1  | "5830603".pn.  | USPAT                  | OR | OFF | 2007/12/07 11:00 |
| S277 | 1  | S276 and resin and film and electrolyte\$2 and porosit\$4  | USPAT                  | OR | OFF | 2007/12/07 11:11 |
| S278 | 1  | "4650730".pn.  | USPAT                  | OR | OFF | 2007/12/07 11:11 |
| S279 | 1  | S278 and resin and film and electrolyte\$2 and porosit\$4  | USPAT                  | OR | OFF | 2007/12/07 11:26 |
| S280 | 1  | "20020055036"  | US-PGPUB               | OR | OFF | 2007/12/07 11:26 |
| S281 | 0  | S280 and (heat near resist\$4) and porosit\$3  | US-PGPUB               | OR | OFF | 2007/12/07 11:26 |
| S282 | 0  | S280 and (heat-resist\$4) and porosit\$3   | US-PGPUB               | OR | OFF | 2007/12/07 11:27 |
| S283 | 0  | S280 and porosit\$3  | US-PGPUB               | OR | OFF | 2007/12/07 11:27 |
| S284 | 1  | S280 and pore\$2   | US-PGPUB               | OR | OFF | 2007/12/07 11:27 |
| S285 | 1  | S280 and pore\$2 and (shut near down) and separator\$2   | US-PGPUB               | OR | OFF | 2007/12/07 11:28 |
| S286 | 1  | "5705292".pn.  | USPAT                  | OR | OFF | 2007/12/07 11:57 |
| S287 | 1  | S286 and temperature\$2 and particle\$2  | USPAT                  | OR | OFF | 2007/12/07 11:57 |
| S288 | 1  | 10/562438  | US-PGPUB               | OR | OFF | 2007/12/07 12:37 |
| S289 | 0  | S288 and rough\$3  | US-PGPUB               | OR | OFF | 2007/12/07 12:37 |
| S290 | 1  | S288 and rough\$4  | US-PGPUB               | OR | OFF | 2007/12/07 12:38 |
| S291 | 36 | (lithium near battery) and (electrode\$2 near5 roughness)  | US-PGPUB               | OR | OFF | 2007/12/07 12:39 |

|      |    |  |                        |    |     |                  |
|------|----|--|------------------------|----|-----|------------------|
| S292 | 50 | (lithium near battery) and (electrode\$2 near5 roughness)                              | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/07 12:40 |
| S293 | 1  | (lithium near battery) and ((electrode\$2 near2 roughness) same separator)             | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/07 12:40 |
| S294 | 2  | (lithium near battery) and ((electrode\$2 near5 roughness) same separator\$2)          | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/07 12:40 |
| S295 | 5  | (lithium near3 battery) and ((electrode\$2 near5 roughness) same separator\$2)         | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/07 12:41 |
| S296 | 62 | (lithium near3 battery) and (electrode\$2 near5 roughness) and roughness and separator | US-PGPUB; USPAT; USOCR | OR | OFF | 2007/12/07 12:41 |
| S297 | 1  | 10/562438  | US-PGPUB               | OR | OFF | 2007/12/10 10:23 |
| S298 | 1  | S297 and (porosity same separator same electrode)                                      | US-PGPUB               | OR | OFF | 2007/12/10 10:24 |

5/ 9/ 2008 4:56:46 PM

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